

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

**Digital Television Distributed Transmission
System Technologies**

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MB Docket No. 05-312

THE PENNSYLVANIA STATE UNIVERSITY’S COMMENTS

The Pennsylvania State University (hereinafter, the “University”), by its undersigned attorneys, respectfully submits its comments to the Commission in the above-captioned proceeding in response to the *Notice of Proposed Rule Making* (“*NPRM*”), FCC 05-192, released on November 4, 2005. The University generally supports the Comments filed by the Coalition for DTS (the “Coalition”), and submits these Comments in order to emphasize the value to the University and similarly-situated public broadcasters of distributed transmission system (“DTS”) technologies. The following is respectfully shown:

The University is the licensee of primary analog VHF noncommercial, educational television broadcasting station WPSU-TV, NTSC Channel *3, Clearfield, Pennsylvania. The University also holds a construction permit from the Commission and a special temporary authorization from the Commission, as extended, that authorize the University to build and operate primary digital UHF noncommercial, educational television broadcasting station WPSU-DT on DTV Channel *15 in Clearfield, Pennsylvania. WPSU-DT has maximized its facilities in Clearfield.

WPSU-TV/DT is in the Altoona-Johnstown, Pennsylvania Designated Market Area (“DMA”). Substantial portions of the station’s viewership reside in communities—including the population centers of Altoona and Johnstown—that are located in valleys and other low-lying terrain that are shielded by mountain ridges and hills. The station broadcasts from Clearfield, Pennsylvania, but cannot provide a usable over-the-air signal to either Altoona or Johnstown due both to the distances and topography involved. Since WPSU-TV/DT, as a public television station and PBS affiliate, relies in significant part for its financial support from its viewers, it is critical that the station’s transmissions reach these shielded population centers. Cable retransmission of WPSU-TV’s analog signal in these low-lying communities is important in enabling the station to reach its viewers and supporters, but neither WPSU-TV nor any other public television station is able to provide an over-the-air signal to these communities.

WPSU-DT currently operates a two-transmitter DTS on DTV Channel *15. The larger of its two transmitters is located at the WPSU-TV analog transmission location, seven miles north of Clearfield; the smaller WPSU-DT transmitter is in Pine Grove Mills, on a mountaintop overlooking the State College, Pennsylvania population center. This transmitter currently operates pursuant to an experimental authorization from the Commission. The system operates 24 hours a day, seven days a week, and is functioning as designed. Test data for the system are expected to substantiate the system's proper operation.

The University has planned additional WPSU-DT distributed transmitters for both Altoona and Johnstown, and has secured federal grant funding from the U.S. Department of Agriculture for the construction and installation of those facilities. However, both Altoona and Johnstown are at the edge of the 39 dBu contour of the large transmitter in Clearfield. Therefore, in order for WPSU-DT's transmitter to radiate sufficient power to provide adequate coverage for the Altoona and Johnstown population centers, it will be necessary to extend the station's 39 dBu contour to some degree. The system would be designed with enough radiated power and a proper radiation pattern in order to adequately cover the desired population area while minimizing to the extent possible the radiation beyond the 39 dBu contour.

The University therefore supports the Coalition proposal that a licensee be allowed to serve its entire DMA prior to completion of the digital television transition, on

a secondary basis outside of its licensed coverage area, but holding primary status within that licensed coverage area. Under this proposal, a licensee utilizing DTS would operate on a primary basis throughout the remainder of its DMA after the completion of the digital transition, provided that applicable interference and minimum service area requirements are met. Since cable and satellite subscribers are already able to receive the signals of WPSU-TV throughout the entire DMA, no policy justification can support the denial of access to WPSU-TV/DT's valuable programming for television viewers who rely on over-the-air broadcasting in those parts of the DMA where they cannot receive such a signal from WPSU-TV/DT, particularly where such viewers are not served by other public television stations. Moreover, it is unlikely—if not impossible—that a new entrant could provide service on the University's allocated channel elsewhere in the DMA, given the obvious risk of co-channel interference problems.

Based on its experience to date with DTS, the University believes that this technology provides an efficient solution to the problems faced by WPSU-DT and other, similarly-situated DTV stations. The use of DTS enables WPSU-DT's signal to reach some otherwise-shielded populations in valleys and low-lying terrain areas. Adoption of the approach proposed by the Coalition would enhance the University's ability to serve additional, key population centers in its DMA, and would allow the residents of these areas to receive over-the-air public television for the first time.

As noted above, the University generally supports the Comments that are being submitted to the Commission in this proceeding by the Coalition. The Coalition's Comments go into considerable detail in explaining the public interest benefits of DTS. The Coalition's Comments demonstrate that the adoption of final rules governing the use of DTS would improve the quality of indoor, over-the-air reception to many viewers, and would give broadcasters a cost-effective alternative to building out their DTV service areas with full-power transmitters. The University respectfully urges the Commission to adopt final rules for DTS that are consistent with the principles outlined in the Coalition's Comments.

Respectfully submitted,

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